

Official

5  
of 8REMARKS

The Office action of September 8, 2008, has been carefully considered and reconsideration of the amended application is earnestly solicited.

The amendments in the claims are intended to correct a few flaws kindly pointed out by the Examiner. The amended Claims 15 through 19 are believed to overcome the 37 CFR 1.75(c) objection of the Office action.

As to the double patenting objection relating to claims of our copending application, a terminal disclaimer has been prepared and will be submitted upon indication of allowability of claims.

As to the rejections based on 35 USC § 102, please note that the cited Bentley patent discloses two distinct embodiments based on the use of "baffled separators," the first of which is represented by its Fig. 1 and addressed to the monitoring of air contaminants, as in our claims, whereas the second embodiment represented by Fig. 3 is directed at "cleaning a gas" [see Abstract, penultimate sentence, or Column 1, Lines 66-68]. Since our basic Claims 1 and 5 are restricted to "detecting the presence of an airborne chemical or biological analyte," the gas cleaning embodiment of Bentley's Fig. 3 does not apply to them. Neither does the electrostatic precipitator of Fig. 3, which is part of a final gas clean-up [Column 3, Lines 33-35].

Moreover, although an incomplete citation from Grindell's Column 1, Lines 39-46, might be interpreted as referring to a specific structure, the introductory phrase "may generally consist of" [Line 40] clearly implies other possible structures. In any case, there is no mention in Bentley's disclosure of "a gas- and liquid-containing chamber," and "means for introducing an analyte-free collection liquid into said chamber" of our Claim 1 and said analyte-free liquid could not have been sensibly introduced into the clean-up precipitator of Bentley's Fig 3.

Since the latter has thus been shown to be inapplicable to our basic Claims 1 and 5 and there is no discharge or collector electrode shown in any of Bentley's figures or in their accompanying disclosure, the objections to these claims based on 35 USC § 102 appear to have been removed.

As to the rejection of our **Claims 2, 3, 6, and 7** based on Bentley's following sentence: "A mist created by a piezoelectric ultrasonic transducer is contacted with the gas and both gas and mist are passed through baffled separators" (Column 1, Lines 47-50), it must be noted that the sentence refers explicitly to "baffled separators" and not to any collector electrode tube and that the function of Bentley's mist is not to wet any inner walls but rather to react with or absorb solid and gaseous materials from the gas stream (Column 1, Lines 51-53). The argument that a residual portion of mist reaches the electrostatic precipitator of Bentley's Fig. 3 falls apart in view of our above demonstration that the cited precipitator is irrelevant to our claims. The same applies to the objection to **Claim 9**. It is therefore respectfully submitted that the objections to these claims based on 35 USC § 102 appear to have been removed likewise.

Official

6  
of 8

As to the objection to **Claims 12-14**, we again find no mention of “an electrostatic precipitation-based aerosol collector” in Bentley’s Summary of Invention or Column 1, Lines 23-36 or Column 2, Lines 10-17. The “piezoelectric ultrasonic transducer” found in these citations serves to generate mist particles but not to capture them. However, claim 12 has been further amended to start with the wording “A method of capturing for detection...” which again excludes from consideration the electrostatic precipitator of Bentley’s patent. Objections based on the argument that electrostatic precipitators capture sub-micron-size particles would be valid for applications pertaining to air scrubbing, such as those of Bentley’s Fig. 3, but not to capture for detection, which is a new application of such precipitators. It is to be noted that most existing aerosol collectors intended for monitoring of hazardous air contaminants can not capture sub-micron-size particles with the efficiency that is required for their ultra-sensitive detection. Any virus particles that they collect are mostly those which are attached to larger carriers, such as water droplets or dust particles, or are agglomerated into larger sizes. Since individual virus particles or their smaller agglomerates remain afloat in air for longer times and in larger numbers than the larger carriers or agglomerates, their efficient collection greatly enhances their detection sensitivity and thus opens the way to timely detection of hazardous viruses, such as those of pandemic influenza. The realization of the importance of such new detection capability constitutes a novel discovery which should qualify for patent protection.

**It is therefore believed that the amended claims overcome the objections based on 35 USC § 102.**

As to the rejections of **Claims 4, 8, 10, 11, and 15-20** based on 35 USC § 103, it was noted above that Bentley’s Fig. 1, which shows an analyzer 23 appropriate for air monitoring applications, does not include any electrostatic precipitator and no such precipitator is mentioned in its accompanying textual disclosure. It was also shown above, that the electrostatic precipitator of Bentley’s Fig. 3 does not constitute any essential part of Bentley’s baffle separation invention, but is merely a coincidental adjunct of a final clean-up step which could not in any reasonable way comprise “a gas- and liquid-containing chamber” and “means for introducing an analyte-free collection liquid into said chamber” as called for in our basic claims 1 and 5. This refutes Arguments 13, 16, and 20, pertaining to our **Claims 15, 19, and 10**, that Bentley et al. discloses or teaches the apparatus of Claim 1. Hence the rejections based on these arguments must be similarly invalidated.

Similarly, Arguments 14 and 17, addressed to our **Claims 16 and 4** stating that “Bentley et al. discloses the apparatus of Claim 2” are not sustainable, since the subsidiary Claim 2 includes all the features of our basic Claim 1, which was shown above not to be disclosed by Bentley. Hence the rejections based on these arguments should also be rescinded.

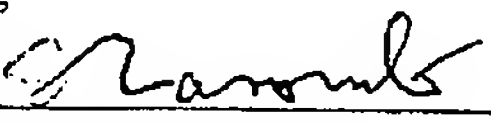
Again, Argument 15, addressed to **Claim 18**, Argument 18, addressed to **Claim 8**, Argument 19, addressed to **Claim 20**, Argument 21, addressed to **Claim 11**, and Argument 24, addressed to **Claim 17**, are each based on assertions that Bentley discloses the apparatus of subsidiary Claims 16, 4, or 9 or the method of Claim 6, which comprise all the features of our basic Claims 1 or 5, both of which were shown above not to be really disclosed by Bentley. **Hence all the rejections based on 35 USC § 103 should be withdrawn.**

Official

7  
of 8

It is therefore requested that the amended claims be found to be allowable.

Respectfully submitted by,

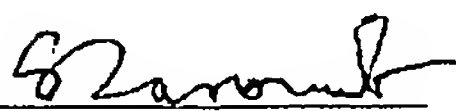
  
\_\_\_\_\_  
Solomon Zaromb  
Registration No. 28,571  
9S 706 William Dr.  
Burr Ridge, IL 60527  
Telephone: 630/654-2109  
Fax: 630/986-8764

Official

8  
of 8

CERTIFICATION OF FAXING

The undersigned hereby certifies that this response is about to be transmitted to fax number 571-273-8300 on or about December 6, 2008.

  
Solomon Zaromb